

ABSTRACT OF THE DISCLOSURE

A method for balancing the load of a parallel processing system having parallel processing elements (PEs) linked serially in a line with first and second ends, wherein each of the PEs has a local number of tasks associated therewith, the method comprising determining a total number of tasks present on the line; notifying each of the PEs of the total number of tasks, calculating a local mean number of tasks for each of the PEs, and calculating a local deviation for each of the PEs. The method also comprises determining a first local cumulative deviation for each of the PEs, determining a second local cumulative deviation for each of the PEs, and redistributing tasks among the PEs in response to the first local cumulative deviation and the second local cumulative deviation.